

REMARKS

The Examiner has objected to the drawings under 37 C.F.R. 1.83(a) as not showing the "annular strip" of claim 9.

Applicant submits that the Examiner is mistaken. In particular, the specification, on page 5, lines 23-27, states "the panel 1 is secured to a frame 9 by means of a compliant strip 7 of a soft material." As shown in Fig. 1, this compliant strip 7 is indeed annular in shape and, as shown in Fig. 2, connects the panel 1 to the frame (portions of which are shown in Fig. 2 and identified by the reference number 9).

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claim 7 has been made a proper independent claim and includes the limitations of the base claim 1 and any intervening claims (none).

The Examiner has rejected claims 1 and 4 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 3,247,925 to Warnaka. The Examiner has further rejected claim 2 and 3 under 35 U.S.C. 103(a) as being unpatentable over Warnaka. In addition, the Examiner has rejected claims 5, 6 and 10 under 35 U.S.C. 103(a) as being unpatentable over Warnaka in view of U.S. Patent 6,411,723 to Lock et al. Finally, the Examiner has rejected claim 9 under 35 U.S.C. 103(a) as being unpatentable over Warnaka in view of U.S. Patent 6,144,746 to Azima et al. Applicants acknowledge that the

Examiner has found claims 7 and 8 allowable over the prior art of record.

In view of the above changes, Applicants believe that claims 7 and 8 should now be allowed.

The Warnaka patent discloses a loudspeaker including a panel comprising a rigid core 11 sandwiched between two skins 12 and 13. The panel is mounted in a rigid frame 14 and excited by a conventional voice coil arrangement (5, 7, 8, 9).

The subject invention relates to a flat panel loudspeaker in which an acoustic panel has a first main surface and a second main surface. As claimed in claim 1, the loudspeaker includes "an electrical exciter positioned on a side of said acoustic panel comprising said first main surface and arranged on the first main surface", and "a tuning element positioned on a side of said acoustic panel comprising said second main surface, disposed near the second main surface and extending at least partly opposite the exciter, said tuning element forming a resonant cavity with the acoustic panel".

As noted in MPEP § 2131, it is well-established that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, and that "The identical invention must be shown in as complete detail as is contained in the ...

claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Examiner has indicated that Warnaka discloses "a frame member 14 comprising rigid mounts for attaching the acoustic panel thereto, said frame member 14 with its rigid mounts providing some degree damping to the vibration of the panel, which reads on "a tuning element"; a rigid mount being attached to the second main surface 13 of the acoustic panel 11, reading on "disposed near the second main surface" and also shown in figure 1, frame member 14 encloses the first main surface 12 of the acoustic panel and also encloses the electrical exciter (5-7-8-9), thereby reading on "and extending at least partially opposite the exciter"; and wherein by enclosing the first main surface 12 of the panel, the frame member 14 "form[s] a resonant cavity with the acoustic panel".

Applicant submits that the Examiner is mistaken. In particular, claim 1 specifically states "a tuning element positioned on a side of said acoustic panel comprising said second main surface, disposed near the second main surface and extending at least partly opposite the exciter, said tuning element forming a resonant cavity with the acoustic panel". By simply examining Fig. 1 of Warnaka, it should be apparent that the frame 14 is positioned substantially on a side of the acoustic panel comprising the first main surface (i.e., steel skin 12). Further, the frame 14 is disposed near the first main surface 12, and not the second main

surface 13. Finally, it should be apparent that the frame 14 does not extend "at least partly opposite the exciter", but rather, extends along with the exciter.

Applicant further submits that the Examiner has made certain assumptions with regard to Warnaka that are not supported by Warnaka. In particular, the Examiner in viewing the cross-section of Fig. 1, assumes that the frame 14 forms a resonant chamber with at least surface 12 of the panel 10. However, there is no disclosure in Warnaka of such a resonant chamber. In fact, there is no disclosure in Warnaka that the frame 14 encloses the exciter. With regard to any tuning aspects of the frame 14, Warnaka only mentions ways in which the panel 10 may be mounted to the frame 14 which would affect the sonic qualities of the panel (see col. 3, lines 3-27).

With regard to claims 2 and 3, Applicant would like to remind the Examiner that element 17 is a "tuning element", and not a frame for mounting the panel. Hence, the shape of (and the presence) the tuning element is directly related to the tuning of the loudspeaker. This is described in the specification on page 7, lines 1-7, referencing Fig. 7. That rigid mounting members of Warnaka may take any of a variety of shapes and configurations for the purpose of rigidly mounting the acoustic panel thereto, is irrelevant to the subject invention.

The Lock et al. patent discloses loudspeakers each having an acoustic panel 14 with a front 25 and rear 26 surface, a magnet/voice coil 17/18 attached to the panel via a hole in the panel 14 thereby being in contact with both the front and rear surfaces, and a rigid panel 28 for modifying the frequency response curve of the loudspeaker, the rigid panel 28, a frame 11 and the panel forming an acoustic cavity.


While Lock et al. discloses that "the frame 11 holds the front diaphragm 14 at a distance of around 3-5 mm from the front face of the panel 28", it should be apparent that if the panel 28 is to be considered the tuning element as claimed, then the panel 28 is positioned on the wrong side of the diaphragm!

The Azima et al. patent discloses loudspeakers comprising panel-form acoustic radiating elements in which a sound radiating panel is supported in a frame by a resilient suspension. However, Applicant submits that Azima et al. does not supply that which is missing from Warnaka, i.e., "an electrical exciter positioned on a side of said acoustic panel comprising said first main surface and arranged on the first main surface", and "a tuning element positioned on a side of said acoustic panel comprising said second main surface, disposed near the second main surface and extending at least partly opposite the exciter, said tuning element forming a resonant cavity with the acoustic panel".

In view of the above, Applicant believes that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicant believes that this application, containing claims 1-10, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

by   
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